

MULTI-ELECTRODE APPARATUS AND METHOD FOR TREATMENT OF CONGESTIVE HEART FAILURE

Abstract

An apparatus and method for treatment of congestive heart failure from the right side of the heart. An implantable cardiac stimulation system with a multi-electrode lead having three or more selectable electrodes, together with apparatus for identifying an optimal subset of electrodes, apparatus for shaping a propagating wave front, and apparatus for modifying the intrinsic ventricular cardiac activation sequence, or generating simultaneous or near simultaneous pacing pulses to the septum or right ventricular outflow tract during ventricular systole in order to improve left ventricular cardiac efficiency and reduce mitral regurgitation in patients with dilated cardiomyopathy. A three dimensional map of electrode placement may be calculated. A sub set of the available electrodes in the right side of the heart is selected for stimulation such that septal motion during systole is reduced or the mitral valve area is stiffened to reduce mitral regurgitation.